

WHAT IS CLAIMED IS:

1. A method for automatically updating stock and mutual fund grammars in a speech recognition system,  
5 comprising the steps of:

automatically updating, on a pre-specified basis, a database having a plurality of entries, each entry respectively corresponding to a publicly traded stock or a publicly traded fund, and respectively comprising at least  
10 one name of the publicly traded stock or publicly traded fund, a weight for the at least one name, and baseforms of the at least one name; and

automatically updating a grammar file for names in the database, the grammar file including the names and  
15 weights for the names.

2. The method according to claim 1, wherein said updating step comprises the steps of:

automatically identifying, from web sites, stocks  
20 and funds that are no longer listed on a market; and

automatically removing from the database any of the plurality of entries corresponding to the identified stocks and funds.

3. The method according to claim 1, wherein said updating step comprises the steps of:

automatically identifying, from web sites, newly listed stocks and newly listed funds, if any; and

5 automatically creating an entry in the database for each of the newly listed stocks and the newly listed funds.

4. The method according to claim 3, wherein said creating step comprises the steps of:

determining the weights for the names of the newly listed stocks and the newly listed funds; and

generating the baseforms of the names of the newly listed stocks and the newly listed funds.

5. The method according to claim 1, wherein said updating step comprises the steps of:

identifying the transaction volumes of any stocks and funds for which an entry exists in the database;

20 quantizing the transaction volumes into a plurality of bands; and

assigning a corresponding weight to each of the plurality of bands.

6. The method according to claim 5, wherein a given corresponding weight assigned to a given band corresponds to each of the names of any of the stocks and funds in the given band.

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7. The method according to claim 1, further comprising the steps of:

automatically combining short words in the database to form combined words, a short word being a stock name or a fund name that has less than a predefined number of phonemes;

automatically generating the baseforms for the combined words; and

updating the grammar file to include the combined words.

8. The method according to claim 1, wherein said step of updating the database comprises the step of automatically adapting the weights for the names in the database, based upon a transaction volume over a predetermined period of time.

9. The method according to claim 1, wherein said step of updating the database is performed on a pre-specified basis.

5 10. The method according to claim 9, wherein the pre-specified basis is daily.

10 11. The method according to claim 1, wherein each of the plurality of entries further comprises one of corresponding resolved stock names or corresponding resolved fund names, if any.

15 12. The method according to claim 1, wherein each of the plurality of entries further comprises corresponding stock nicknames or corresponding fund nicknames, if any.

13. A method for automatically updating stock and mutual fund grammars in a speech recognition system, comprising the steps of:

20 constructing a database having a plurality of entries, each entry respectively corresponding to a publicly traded stock or a publicly traded fund, and respectively comprising at least one name of the publicly traded stock or

publicly traded fund, a weight for the at least one name,  
and baseforms of the at least one name;

generating a grammar file for names in the  
database, the grammar file including the names and weights  
5 for the names;

automatically updating the database on a  
pre-specified basis, including adding new entries for newly  
listed stocks and newly listed funds and removing any of the  
plurality of entries corresponding to newly unlisted stocks  
10 and newly unlisted funds; and

automatically updating the grammar file with  
respect to the newly listed stock names and the newly listed  
fund names.

14. The method according to claim 13, wherein said  
15 step of removing any of the plurality of entries  
corresponding to the newly unlisted stocks and the newly  
unlisted funds comprises the step of automatically  
identifying, from web sites, stocks and funds that are no  
20 longer listed on a market.

15. The method according to claim 13, wherein said  
step of adding the new entries for the newly listed stocks  
and the newly listed funds comprises the step of

automatically identifying, from web sites, the newly listed stocks and newly listed funds, if any.

16. The method according to claim 13, wherein said  
5 step of updating the database comprises the steps of:

identifying the transaction volumes of any stocks  
and funds for which an entry exists in the database;

quantizing the transaction volumes into a  
plurality of bands; and

10 assigning a corresponding weight to each of the  
plurality of bands.

17. The method according to claim 13, further  
comprising the steps of:

15 automatically combining short words in the  
database to form combined words, a short word being a stock  
name or a fund name that has less than a predefined number  
of phonemes;

20 automatically generating the baseforms for the  
combined words; and

updating the grammar file to include the combined  
words.

18. The method according to claim 13, wherein said step of updating the database comprises the step of automatically adapting the weights for the names in the database, based upon a transaction volume over a predetermined period of time.

19. The method according to claim 13, wherein each of the plurality of entries further comprises one of corresponding resolved stock names or corresponding resolved fund names, if any.

20. The method according to claim 13, wherein each of the plurality of entries further comprises corresponding stock nicknames or corresponding fund nicknames, if any.

21. The method according to claim 13, wherein said step of updating the database comprises the step of automatically generating baseforms of the newly listed stock names and the newly listed fund names.

22. An apparatus for automatically updating stock and mutual fund grammars in a speech recognition system, comprising:

a database update device for automatically updating, on a pre-specified basis, a database having a plurality of entries, each entry respectively corresponding to a publicly traded stock or a publicly traded fund, and  
5 respectively comprising at least one name of the publicly traded stock or publicly traded fund, a weight for the at least one name, and baseforms of the at least one name; and

a grammar generator for automatically updating a grammar file for names in the database, the grammar file  
10 including the names and weights for the names.

23. The apparatus according to claim 22, further comprising a web extractor for automatically identifying, from web sites, stocks and funds that are no longer listed  
15 on a market, and wherein said database update device automatically removes from the database any of the plurality of entries corresponding to the identified stocks and funds.

24. The apparatus according to claim 22, further  
20 comprising a web extractor for automatically identifying, from web sites, newly listed stocks and newly listed funds, if any, and wherein said database update device automatically creates an entry in the database for each of the newly listed stocks and the newly listed funds.



25. The apparatus according to claim 24, wherein said database update device determines the weights for the names of the newly listed stocks and the newly listed funds, and said apparatus further comprises a baseform generator for generating the baseforms of the names of the newly listed stocks and the newly listed funds.

26. The apparatus according to claim 22, wherein said database update device identifies the transaction volumes of any stocks and funds for which an entry exists in the database, quantizes the transaction volumes into a plurality of bands, and assigns a corresponding weight to each of the plurality of bands.

27. The apparatus according to claim 26, wherein a given corresponding weight assigned to a given band corresponds to each of the names of any of the stocks and funds in the given band.

28. The apparatus according to claim 22, further comprising:

a short word combiner for automatically combining short words in the database to form combined words, a short

word being a stock name or a fund name that has less than a predefined number of phonemes; and

a baseform generator for automatically generating the baseforms for the combined words; and

5 wherein said grammar generator updates the grammar file to include the combined words.

10 29. The apparatus according to claim 22, wherein said database update device automatically adapts the weights for the names in the database, based upon a transaction volume over a predetermined period of time.

15 30. The apparatus according to claim 22, wherein said database update device updates the database on a pre-specified basis.

31. The apparatus according to claim 30, wherein the pre-specified basis is daily.

20 32. The apparatus according to claim 22, wherein each of the plurality of entries further comprises one of corresponding resolved stock names or corresponding resolved fund names, if any.

